

.What is claimed is:

1. A holographic recording medium comprising:

a crystal body including a lithium niobate single crystal or a lithium tantalate single crystal which has substantially stoichiometric composition and includes Mn as an impurity in the range from 1 wt ppm to 100 wt ppm.

2. The holographic recording medium according to claim 1,

said crystal body includes a first energy level, a second energy level, and a third energy level, wherein said first energy level exists at the deeper energy position than said second energy level measured from the bottom of a conduction band, wherein said third energy level exists at the deeper energy position than said second energy level measured from the bottom of the conduction band, wherein carriers are excited from said first energy level to said second energy level by the irradiation of a gating light at a wavelength of 410nm or shorter, wherein said carriers excited to said second energy level are trapped to said third energy level by the irradiation of a signal light and a reference light at a wavelength longer than said gating light.

3. The holographic recording medium according to claim 1,

wherein a product $\alpha_s \cdot L$ of an optical absorption coefficient (α_s) of said lithium niobate single crystal or lithium tantalate single crystal with respect to said gating light and a length (L) of said single crystal along said gating light incident direction is within a range of 0.5 to 2.0.

4 A holographic recording/reproducing apparatus for recording information in a holographic recording medium and for reproducing information from said holographic recording medium comprising:

a first irradiation means for irradiating said holographic recording medium with a gating light having a wavelength of 410 nm or shorter; and

a second irradiation means for irradiating said holographic recording medium with a signal light containing information to be recorded and a reference light.

wherein said gating light has a shorter wavelength than those of said signal light and said reference light,

wherein said holographic recording medium comprises a crystal body including a lithium niobate single crystal or a lithium tantalate single crystal which has substantially stoichiometric composition and includes Mn as an impurity in the range from 1 wt ppm to 100 wt ppm.